REMARKS

The Office Action dated September 26, 2003 has been reviewed and carefully considered. Claims 1-6 remain pending, of which the independent claims are 1 and 6.

Claims 1-6 stand rejected under 35 U.S.C. 103(a) as unpatentable over U.S. Patent No. 6,236,764 to Zhou in view of U.S. Patent No. 5,796,875 to Read.

Claim 1 recites "A method . . . comprising . . . at least the steps of: . . . filtering . . . said filtering step being applied to . . . a selected segment of consecutive pixels located on a single line or column . . . and on both sides of a boundary between two blocks . . . wherein said filtering step is applied only if the two pixels at the ends of said segment have chrominance components that agree with a similarity criterion."

Item 3 of the Office Action cites equation 5 of column 11 of Zhou, which fails to disclose or suggest "a selected segment of consecutive pixels located on a single line or column" which is explicitly required by the language of claim 1. At best, Zhou discloses a selected segment of each of two strings of consecutive pixels, the strings being located each respectively on a single line or column.

As a further complication to what item 3 of the Office Action is suggesting, the filtering step in claim 1 is applied only if "the two pixels at the ends of said segment . . .," whereas the structure cited in Zhou has two pixels at each end of the purported segment, for a total of four pixels at the ends of the purported segment.

Item 3 ignores these differences between the Zhou and invention as recited in claim 1, but acknowledges that Zhou fails to disclose or suggest that the filtering step

"is applied only if the two pixels at the ends of said segment . . ." and offers the Read reference to make up for the shortcoming conceded.

Regarding the purported Zhou/Read combination, Zhou decides whether or not to filter an entire boundary 122, the boundary being viewed as a vertical line (see FIG. 6). Zhou bases the decision on whether or not to filter on a difference between horizontal boundary roughness R_{AB} and an average of the horizontal roughness R_{Ah} and R_{Bh} (equations 1, 2, 5, 7-9 and 11). The horizontal boundary roughness R_{AB} is derived from pair-wise pixel absolute differences along the boundary, each pixel of the pair being separated from its mate by the boundary. Horizontal roughness R_{Ah}, R_{Bh} is derived based on a total over the entire block A, B of absolute differences between a pixel and its counterpart in the immediately adjacent column.

Read, by contrast, decides whether or not to filter a particular pair of pixels, each pixel of the pair being on the vertical boundary (FIG. 3) and being separated from its mate by the boundary. The decision on whether or not to filter is based on a comparison between a vertical difference total and the absolute difference between the pixels of the pair. The vertical difference total is equal to the sum of absolute differences between (a) the left pixel of the pair and the immediately vertically adjacent pixel in the row above; and (b) the left pixel of the pair and the immediately vertically adjacent pixel in the row below.

The motivation suggested by item 3 of the Office Action for modifying Zhou in view of Read is presumably to make Zhou simpler and faster. Item 3 states that Zhou compares "averages of boundary regions" whereas Read compares "boundary pixels on a pair-wise basis." Item 3 then cites to column 3, lines 2-10, of Read for the

proposition that the Read process only affects the boundary pixels, i.e., those immediately on the boundary, and is simple to perform so that computations can be performed in real time to provide the speed needed to support a video conference.

On the one hand, it is unclear how Read could "modify" Zhou, at least because Zhou decides whether to filter based on border differences and column differences, whereas Read decides whether to filter based on a border difference and a row difference.

> If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) MPEP 2143.

The apparent suggestion that the principle of operation of the primary reference, Zhou, be modified renders claim 1 non-obvious over the cited references for at least this reason.

It is also unclear, moreover, how the purported Zhou/Read combination could meet the limitations of claim 1, even if all of the above-noted distinctions could in any proper or fair sense be ignored, at least because Zhou/Read would not apply its filtering to a pair of pixels on the purported Zhou/Read "segment" "only if the two pixels at the ends of said segment have chrominance components that agree with a similarity criterion."

As to claim 6, it is an apparatus claims corresponding to method claim 1, and is likewise deemed patentable over the cited references.

The remaining claims each depend from a base claim and are deemed to be patentable at least because of their dependency, although each merits further consideration based on its additional merits.

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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